Having thus defined the invention, the following is claimed:

1. An apparatus for welding, said apparatus comprising:

a lift mechanism for lifting a personnel platform attached to an end of said lift mechanism;

a drive system for moving said apparatus, said drive system including a DC power source;

a set of controls mounted on said platform for controlling said drive system and said lift mechanism; and

an electric arc welding system mounted on said personnel platform for creating a DC welding arc between an electrode and a workpiece, said welding system being powered by said DC power source.

2. The apparatus as defined in claim 1, wherein said DC power source of said drive system comprises a 48 volt battery pack.

3. The apparatus as defined in claim 1, wherein said DC power source is supplied with recharging power by an on-board battery charger, said battery charger operative to be plugged into an external AC power source via an extension cord.

4. The apparatus as defined in claim 1, wherein said set of controls is integrated with said welder into a single unit.

5. The apparatus as defined in claim 1, wherein said electric arc welding system has a power supply that supplies welding current to said electrode, said power supply comprising a DC down chopper.

6. The apparatus as defined in claim 5, wherein said DC down chopper includes a DC input source, said DC input source comprising said DC power source of said drive system.

7. The apparatus as defined in claim 1, wherein said electric arc welding system has a power supply that supplies welding current to said electrode, said power supply including a pulse width modulator that at least partially controls said welding current to said electrode and a waveform generator that at least partially controls said pulse width modulator, said power supply creating a series of current pulses that constitute a welding cycle representative of a current waveform, said pulse width modulator controlling a current pulse width of a plurality of said current pulses.

8. The apparatus as defined in claim 7, wherein said power supply comprises a DC down chopper.

9. The apparatus as defined in claim 8, wherein said DC down chopper includes a DC input source, said DC input source comprising said DC power source of said drive system.

10. The apparatus as defined in claim 9, wherein said DC power source of said drive system comprises a 48 volt battery pack.

11. The apparatus as defined in claim 7, wherein said waveform generator drives said pulse width modulator at a frequency of 20 kHz.

12. An apparatus for welding, said apparatus comprising:

a Z-shaped articulating boom lift operative to lift a personnel platform attached to a load-receiving end of said boom lift, said personnel platform comprising a cage and a standing base;

a drive system operative to move said apparatus, said drive system comprising a drive motor and a DC power system;

a set of controls mounted in said cage operative to control said drive system and said articulating boom lift; and

an electric arc welding system mounted in said cage and operative to create a DC welding arc between an electrode and a workpiece, said welding system being powered by said DC power system.

13. The apparatus as defined in claim 12, wherein said DC power system comprises a 48 volt battery pack.

14. The apparatus as defined in claim 12, wherein said DC power system is supplied with recharging power by an on-board battery charger, said battery charger operative to be plugged into an external AC power source via an extension cord.

15. The apparatus as defined in claim 12, wherein said set of controls is integrated with said welder into a single unit.

16. The apparatus as defined in claim 12, wherein said electric arc welding system has a power supply that supplies welding current to said electrode, said power supply comprising a DC down chopper.

17. The apparatus as defined in claim 16, wherein said DC down chopper includes a DC input source, said DC input source comprising said DC power system of said drive system.

18. The apparatus as defined in claim 12, wherein said electric arc welding system has a power supply that supplies welding current to said electrode, said power supply including a pulse width modulator that at least partially controls said welding current to said welding electrode and a waveform generator that at least partially controls said pulse width modulator, said power supply creating a series of current pulses that constitute a welding cycle representative of a current waveform, said pulse width modulator controlling a current pulse width of a plurality of said current pulses.

19. The apparatus as defined in claim 18, wherein said power supply comprises a DC down chopper.

20. The apparatus as defined in claim 19, wherein said DC down chopper includes a DC input source, said DC input source comprising said DC power system of said drive system.

21. The apparatus as defined in claim 20, wherein said DC power system comprises a 48 volt battery pack.

22. The apparatus as defined in claim 18, wherein said waveform generator drives said pulse width modulator at a frequency of 20 kHz.

23. An apparatus for welding, said apparatus comprising:

a scissor lift operative to lift a personnel platform attached to a load-receiving end of said scissor lift, said personnel platform comprising a cage and a standing base;

a drive system operative to move said apparatus, said drive system comprising a drive motor and a DC power system;

a set of controls mounted in said cage and operative to control said drive system and said scissor lift; and

an electric arc welding system mounted in said cage and operative to create a DC welding arc between an electrode and a workpiece, said welding system being powered by o said DC power system.

24. The apparatus as defined in claim 23, wherein said DC power system comprises a 48 volt battery pack.

25. The apparatus as defined in claim 23, wherein said DC power system is supplied with recharging power by an on-board battery charger, said battery charger operative to be plugged into an external AC power source via an extension cord.

26. The apparatus as defined in claim 23, wherein said set of controls is integrated with said welder into a single unit.

27. The apparatus as defined in claim 23, wherein said electric arc welding system has a power supply that supplies welding current to said electrode, said power supply comprising a DC down chopper.

28. The apparatus as defined in claim 27, wherein said DC down chopper includes a DC input source, said DC input source comprising said DC power system of said drive system.

29. The apparatus as defined in claim 23, wherein said electric arc welding system has a power supply that supplies welding current to said electrode, said power supply including a pulse width modulator that at least partially controls said welding current to said welding electrode and a waveform generator that at least partially controls said pulse width modulator, said power supply creating a series of current pulses that constitute a welding cycle representative of a current waveform, said pulse width modulator controlling a current pulse width of a plurality of said current pulses.

30. The apparatus as defined in claim 29, wherein said power supply comprises a DC down chopper.

31. The apparatus as defined in claim 30, wherein said DC down chopper includes a DC input source, said DC input source comprising said DC power system of said drive system.

32. The apparatus as defined in claim 31, wherein said DC power system comprises a 48 volt battery pack.

33. The apparatus as defined in claim 29, wherein said waveform generator drives said pulse width modulator at a frequency of 20 kHz.

34. A mobile welding apparatus, said apparatus comprising:

a vehicle having a DC power source, said vehicle comprising an industrial vehicle or a construction vehicle; and

an electric arc welding system mounted on said vehicle for creating a DC welding arc between an electrode and a workpiece, said welding system being powered by said DC power source.

35. The apparatus as defined in claim 34, wherein said DC power source comprises a 48 volt battery pack.

36. The apparatus as defined in claim 34, wherein said DC power source is supplied with recharging power by an on-board battery charger, said battery charger operative to be plugged into an external AC power source via an extension cord.

37. The apparatus as defined in claim 34, wherein said electric arc welding system has a power supply that supplies welding current to said electrode, said power supply comprising a DC down chopper.

38. The apparatus as defined in claim 37, wherein said DC down chopper includes a DC input source, said DC input source comprising said DC power source of said drive system.

39. The apparatus as defined in claim 34, wherein said electric arc welding system has a power supply that supplies welding current to said electrode, said power supply including a pulse width modulator that at least partially controls said welding current to said electrode and a waveform generator that at least partially controls said pulse width modulator, said power supply creating a series of current pulses that constitute a welding cycle representative of a current waveform, said pulse width modulator controlling a current pulse width of a plurality of said current pulses.

40. The apparatus as defined in claim 39, wherein said power supply comprises a DC down chopper.

41. The apparatus as defined in claim 40, wherein said DC down chopper includes a DC input source, said DC input source comprising said DC power source of said drive system.

42. The apparatus as defined in claim 41, wherein said DC power source of said drive system comprises a 48 volt battery pack.

43. The apparatus as defined in claim 42, wherein said waveform generator drives said pulse width modulator at a frequency of 20 kHz.